

ABSTRACT

An apparatus for sensing the current in a power line of a power system and systems incorporating the apparatus are disclosed. The apparatus may comprise an enclosure providing a window operable to permit the passage of the power line therethrough. The apparatus may further comprise an active current transformer set within the enclosure and operative to produce a scaled version of the current. The apparatus may further comprise an amplifier coupled with the active current transformer and operative to reduce the phase shift and ratio error between the current and the scaled version of the current. The apparatus may further comprise a powering current transformer set within the enclosure and operative to receive power from the power line on a primary winding and deliver power on a secondary winding. The apparatus may further comprise power supply circuitry set within the enclosure, the power supply circuitry powered through the secondary winding from the powering current transformer and operative to supply power to the amplifier. The apparatus may further comprise at least one of secondary leads and secondary terminals extending from the enclosure, coupled with the active current transformer and operative to deliver the scaled version of the current outside of the enclosure.